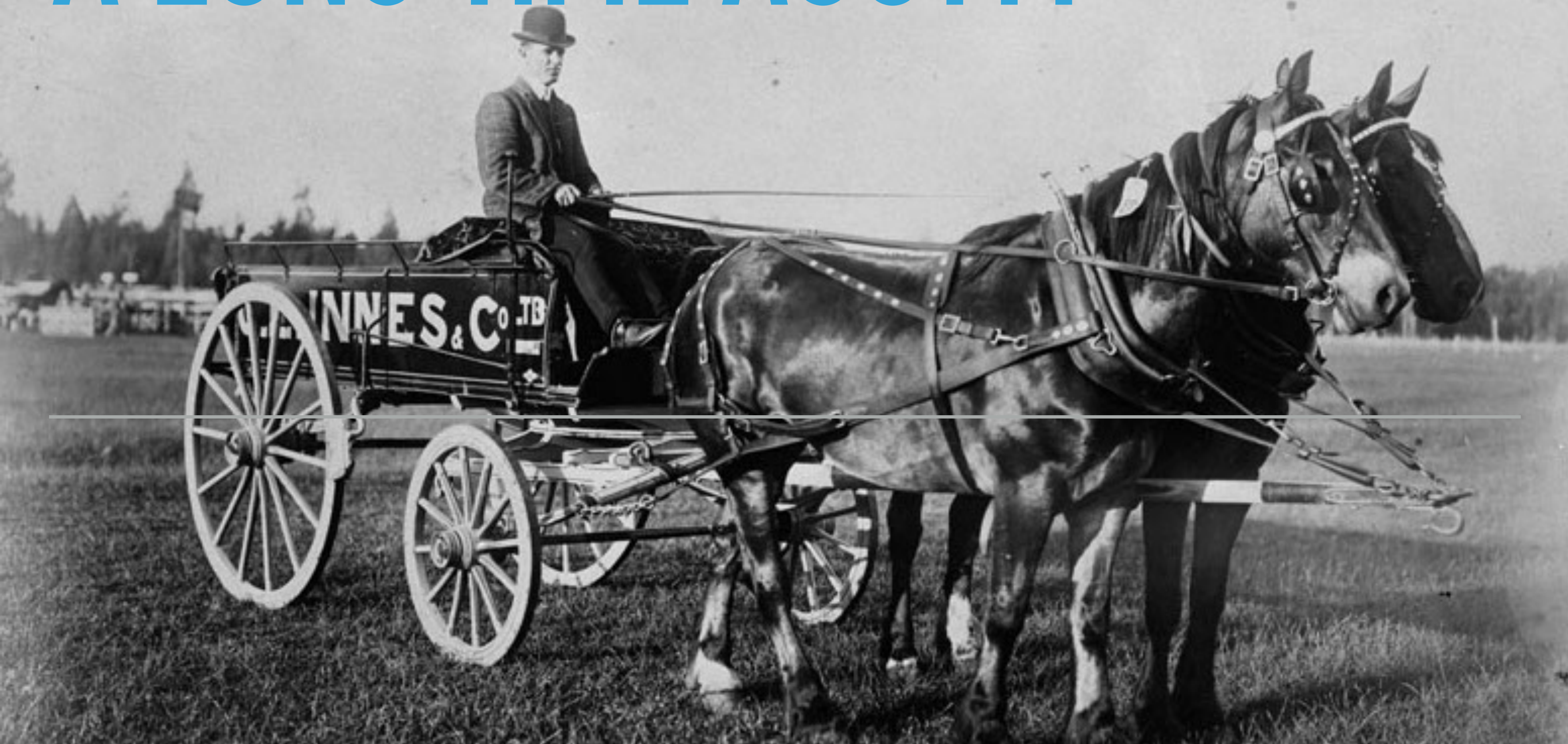CRAIG EDWARDS   @EDWARDAUX

BEYOND THE GLAMOUR

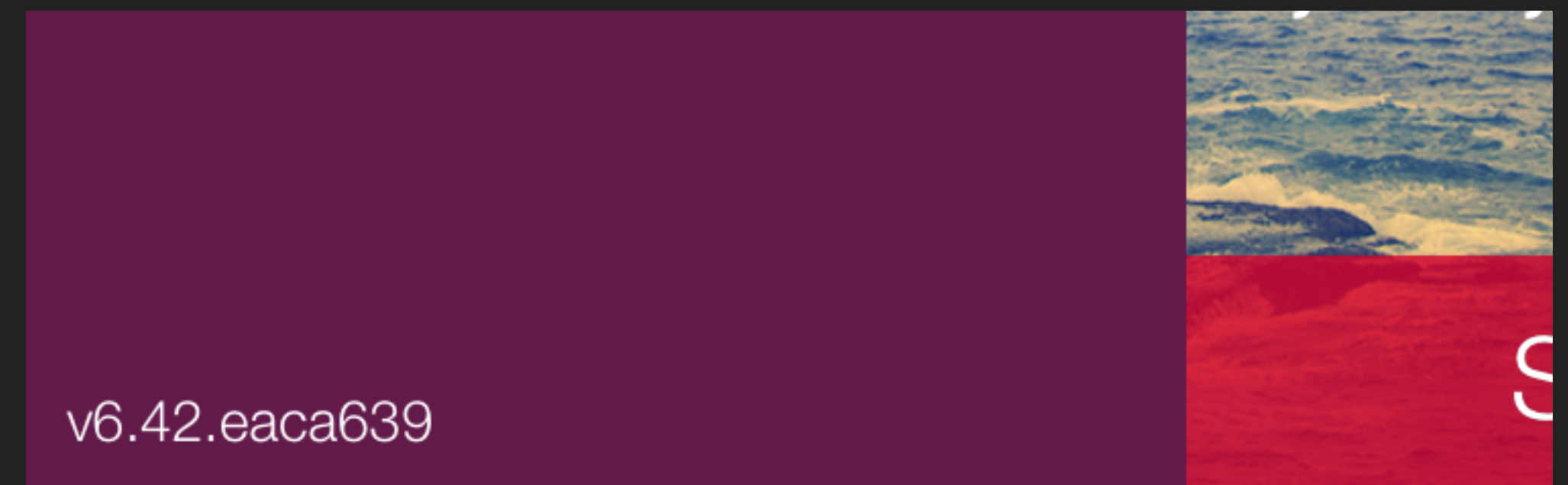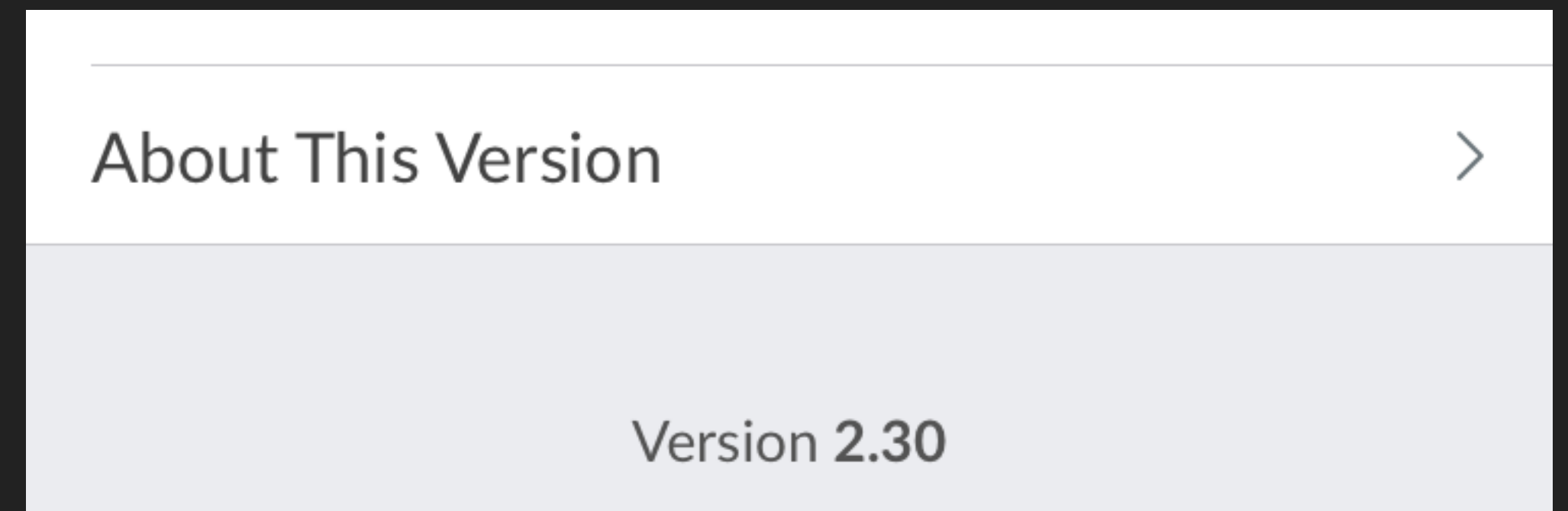BUILDING SUPPORTABLE MOBILE APPS

A LONG TIME AGO . . .

Hello
my name is

Jerk

SUPPORT TEAMS

WHAT APP ARE THEY USING ANYWAY?

▸ Call centre will need to know what version the customer is using

▸ Consistency is king!

WHAT IS GOING ON OUT THERE?

▸ Need a different style of logging

▸ Limited value unless you have physical access to device

▸ Where to store?

  ▸ Rolling fixed-length in-memory - simple but volatile

  ▸ Sqlite database - sophistication and long-term

  ▸ 3rd-party libraries

  ▸ 3rd-party services

IMAGINE YOU'RE READING A BUG REPORT…

▸ Every log entry should be timestamped to the millisecond

▸ Transitions from one screen to another

▸ Transitions between foreground/background

▸ Memory warnings

▸ Orientation changes

▸ The contents of error messages that the user sees

▸ Remote URLs that are hit along with the HTTP response code

▸ When the app transitions from 3G to Wifi

▸ When the user logs in or out

▸ When the user receives, or is launched by, a notification

▸ Geo-fencing events (if appropriate)

META DATA IS IMPORTANT TOO

▸ Bundle identifier

▸ App version (eg. 1.0.2)

▸ OS version (eg. iOS 9, Android 4.4)

▸ Device type (eg. iPhone 6S, Samsung S6)

▸ How long has the app been running

▸ Who the logged on user is

?

HOW MUCH IS TOO MUCH?

▸ Sensitive data

  ▸ Network payloads

  ▸ URLs

  ▸ Financial info

  ▸ User-identifiable history

▸ Limited space on devices

GIMME, GIMME, GIMME...

▸ Service that takes a list of events and returns a unique identifier

▸ Triggers

  ▸ User initiated

  ▸ Server initiated

  ▸ Error condition

BEING PROACTIVE

ANALYTICS – NOT JUST FOR MARKETING

▸ Not just for marketing and business

▸ Network time out

▸ Unexpected network errors

▸ Unexpected data returned from API endpoints.

▸ Is the user running on a jailbroken/rooted device.

▸ OAuth refresh token has expired.

▸ Memory pressure warnings.

CHECKING IF THE LIGHTS ARE STILL ON

▸ API testing tools such as www.runscope.com

▸ Good for prod and non-prod

▸ Integration with Slack

Runscope BOT 18:19
API test run completed. View Result - Edit Test

My Mobile App - Test adding and removing items

Status
Failed

Requests Executed
10

Environment
UAT

Assertions Passed
11 of 14

Location
AU1: Australia

Scripts Passed
2 of 2

Total Response Time
47274ms

NEGATIVE / POSITIVE REVIEWS

‣ App store monitoring tools such as www.appbot.co

‣ Incoming reviews in Slack
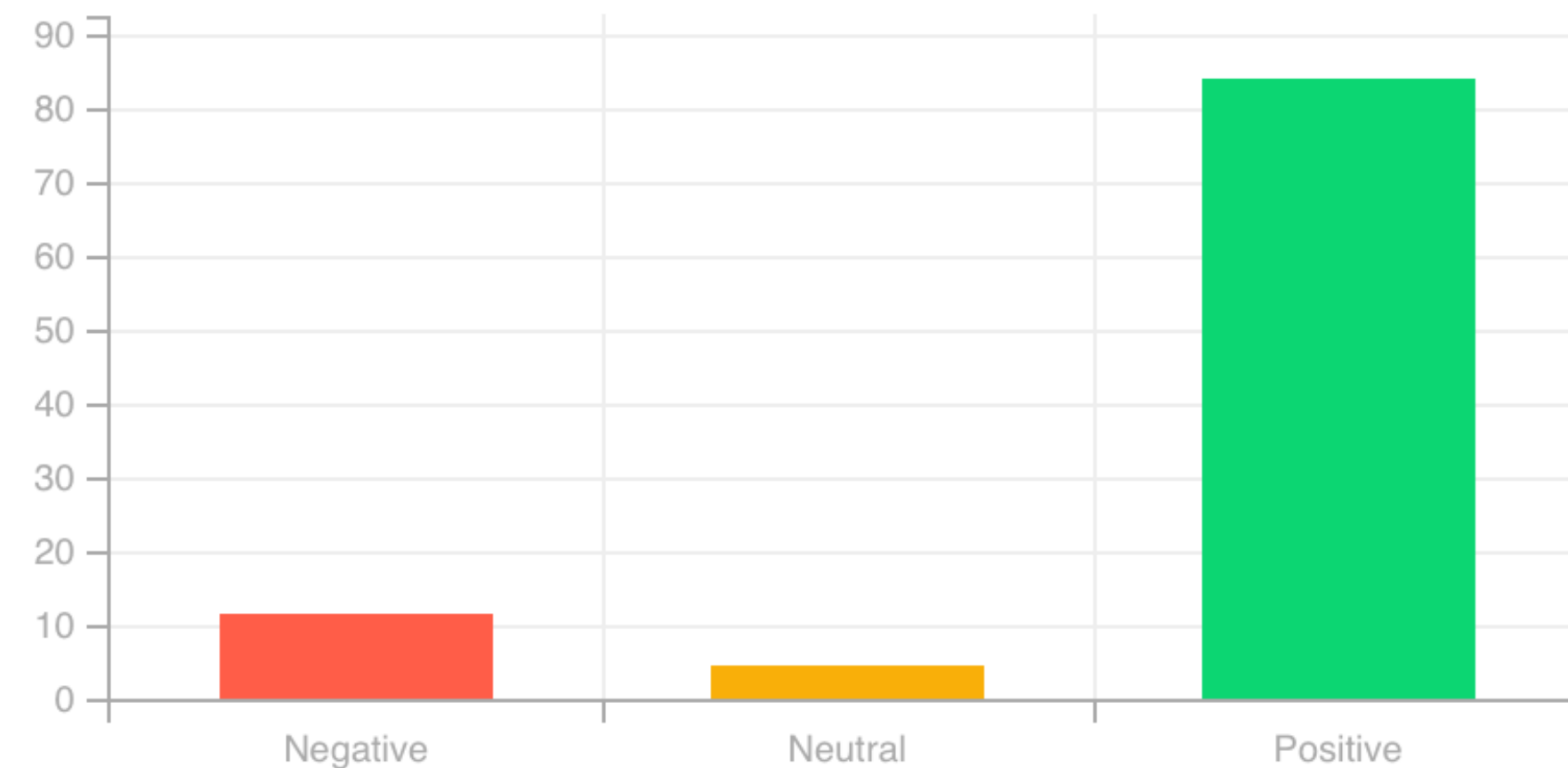
GETTING THE VIBE OF THINGS

▸ App store monitoring tools such as www.appbot.co

▸ Sentiment analysis

Overall Sentiment

Overall sentiment looks pretty good.

Sentiment Breakdown

✓ Excellent! Most users are having a good experience.

HOW'S YOUR SERVER DOING?

▸ Apps can be slow

▸ Phones can be slow

▸ Network calls can be slow

▸ Database calls can be slow

```
HTTP/1.1 200 OK
Date: Wed, 07 Sep 2016 07:09:39 GMT
Content-Length: 242
Connection: close
Content-Type: application/json
X-Server-Time: 1280
```

HEY USER… WE'RE NOT FEELING WELL!

▸ Users just want to know what's going on

▸ Phone home on startup

   ▸ Platform

   ▸ O/S version

   ▸ App version

```
{
    "message" : "We're down. Try later",
    "button"  : "More info",
    "action"  : "http://some/url"
    "prevent" : true
}
```

KEEPING THINGS FRESH

▸ Things change:

▸ Call centre phone numbers

▸ URLs

▸ Feature flags

```
{
    "contact"  : "1300 123456",
    "website"  : "http://some/url",
    "features" : {
        "featX" : true
        "featY" : false
    },
    "npsPerc"  : 0.5
}
```

CODE GENERATION IS YOUR FRIEND

▸ Analytics

**Options Menu	ID & Password**	**356** (0.02%)
**Options Menu	Id & Password**	**143** (0.01%)

▸ App Copy

▸ Error messages

▸ Every error has its own code

BUSINESS MANAGED CONTENT

▸ Presenting web content in a native app is not evil

▸ Extremely useful

    ▸ Ever changing content

    ▸ Marketing offers

    ▸ FAQs / Help

    ▸ Complex business rules

▸ Handle no network

TESTING ISN'T JUST ABOUT TESTING THE APP

▸ Testing is also about testing the support process

  ▸ Log evaluation

  ▸ Call centre integration (level 1, 2, 3 handoff)

  ▸ Upgrade testing

  ▸ Production accounts / impersonation

  ▸ Disabling user's devices

  ▸ How do feature flags get updated?

BUILDING APPS

BUILDS ARE IMMUTABLE

▸ Pick specific versions

```
target 'MyApp' do

  pod 'AFNetworking', '3.0'

end
```

▸ Own your dependencies

▸ leftpad = require('left-pad')

BUILDS PER ENVIRONMENT

▸ Adding new environments should be easy

▸ Driven by configuration

▸ Environmental settings must be under source control

▸ Switching between environments should be easy (no dirty workspaces)

▸ Different icons per environment

▸ Multiple environments on device

▸ http://www.blackdogfoundry.com/blog/migrating-ios-app-through-multiple-environments

SAVING OLD BUILDS

▸ How does feature X in v1.4 work?

▸ You've upgraded Xcode/ruby/bundler/everything

▸ Store old .apk and .ipa files

▸ One for each environment

▸ Consider saving response files too

FUTURE YOU NEEDN'T HATE PAST YOU

@edwardaux